

**REMARKS**

Reconsideration of this application and entry of this Amendment is respectfully requested.

Applicant's attorney gratefully acknowledges the telephone interview with the Examiner, Mr. Melvyn Andrews, on November 2, 2004, wherein the issues concerning claim terminology in independent claims 5, 10, 34 and 44 were discussed. Applicant's attorney appreciates the helpful suggestions of Mr. Andrews and has amended claims 5, 34 and 44 in a sincere effort to more precisely define the invention. Claim 10 has been cancelled.

Support for the amendments to claims 5, 34 and 44 can be found in the specification, particularly on page 1, lines 14-24.

New claims 52, 53 and 54 have also been added that depend from claims 5, 34 and 44, respectively. Claims 52-54 are identical except for their dependency and have been added to more specifically recite the amount of fluorine containing inhibiting agent used to inhibit the oxidation of the molten magnesium/magnesium alloy. Support for the recitation of these claims can be found throughout the specification, specifically at page 3, lines 3-5 and 17-24. No new matter has been added.

Reconsideration and withdrawal of the restriction requirement is respectfully requested. It is respectfully submitted that, the claims listed in Group I and Group II relate to a single inventive concept, the cover gas

composition, and the claims are patentably distinct from U.S. Patent No. 5,115,868 to Dougherty et al, wherein the examiner has relied on column 2, line 65 to column 3, line 33 in maintaining the obviousness of applicants' claimed composition. Applicants respectfully disagree.

Dougherty discloses a trifluoromethane composition to prevent and/or extinguish fire from combustible materials in an enclosed space. (column 2, line 65 to column 3, line 3). Applicants' invention excludes trifluoromethane and claims a cover gas composition to protect molten magnesium/magnesium alloy from oxidation.

In contrast, the combustible materials disclosed by Dougherty are paper, cloth, wood, flammable liquids, and plastic items (column 3, lines 65-68), not molten magnesium/magnesium alloy. Dougherty neither discloses nor suggests a cover gas composition with the claimed fluorine containing inhibiting agents adapted to inhibit the oxidation of molten magnesium/magnesium alloy. Therefore, reconsideration and withdrawal of the restriction requirement is respectfully requested.

Claims 2-12 and 33 have been rejected under 35 U.S.C, §102(b) as anticipated by U.S. Patent No. 6,167,944 to Ricketts et al, relying on column 10, lines 37-51. Applicants respectfully disagree.

Column 10, lines 37-51 recites claims 12 and 13 of Ricketts.

These claims cover a method for casting molten metal in a specific apparatus,

in an atmosphere of a gas such as nitrogen, argon, nitrogen/argon mixtures, dilute sulfur hexafluoride/carbon dioxide, dilute sulfur hexafluoride/carbon dioxide/dry air mixtures, sulfur dioxide/dry air mixtures, and dilute sulfur hexafluoride/dry air mixtures. Applicants' claimed fluorine containing inhibiting agents are not disclosed. Ricketts does not anticipate applicants' claimed invention under 35 U.S.C. §102. Accordingly, reconsideration and withdrawal of this rejection is respectfully requested.

Claims 2-12 and 33 have been rejected under 35 U.S.C. §103 as unpatentable over PCT publication WO 96/22129, with the examiner relying on page 7, lines 21 to last line, page 12, lines 21-23 and page 14, lines 2-7. This ground of rejection is respectfully traversed.

WO 96/22129 relates to a fire extinguishing composition for Class A, Class B and/or Class C fires (page 2, lines 12-22), but not to a cover gas composition to protect molten magnesium/magnesium alloy from oxidation. The composition disclosed in WO 96/22129 at page 7, lines 21 to last line, and page 12, lines 21-23 neither discloses nor suggests applicants' claimed composition or applicants' claimed method for protecting molten magnesium/magnesium alloy from oxidation. Accordingly, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Claims 2-12 and 33 have been rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 5,115,868 to Dougherty et al., with the

examiner relying on column 2, line 65 to column 3, line 33, column 4, lines 31-38 and Examples 1 and 5. This ground of rejection is respectfully traversed.

Dougherty's composition is based on trifluoromethane (column 2, lines 65-68), which is not present in applicants' claimed invention.

Dougherty, at column 4, lines 31-38 also disclose trifluoromethane as a propellant for a fire extinguishing composition. Applicants' claimed cover gas composition does not use a propellant. Applicants' claimed composition is to protect a molten magnesium/magnesium alloy from oxidation, which is not disclosed in Dougherty.

There is no disclosure or suggestion in Dougherty of applicants' cover gas composition or method adapted to protect molten magnesium/magnesium alloy from oxidation. Accordingly, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Claims 2-12 and 33 have been rejected under 35 U.S.C. §103 as unpatentable over PCT publication WO 91/02564 with the examiner relying upon page 4, lines 1-20. This ground of rejection is respectfully traversed.

WO 91/02564 discloses the use of certain hydrofluorocarbons and other fire-extinguishing agents to rapidly extinguish fires (page 2, line 25 to page 3, line 1). In contrast, applicants' claimed invention relates to a cover gas composition for the protection of molten magnesium/magnesium alloy from oxidation. Applicants' claimed invention is neither disclosed nor suggested by

WO 91/02564. Accordingly, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Claims 2-12 and 33 have been rejected under 35 U.S.C. §103 as unpatentable over PCT publication WO 96/22129, U.S. Patent No. 5,115,868 to Dougherty et al and PCT publication WO 91/02564, further in view of U.S. Patent No. 6,167,944 to Ricketts et al. This ground of rejection is respectfully traversed.

The deficiencies of each of these references have already been discussed in detail. Furthermore, the examiner admits that the PCT publications and Dougherty et al do not disclose a cover gas composition to protect molten magnesium/magnesium alloy from oxidation.

It is respectfully submitted that the combination of references compound the deficiencies of the rejection rather than resolve them.

More specifically, Dougherty discloses a trifluoromethane composition to prevent and/or extinguish fire. Applicants' claimed composition and method does not include trifluoromethane.

WO 91/02564 discloses a fire extinguishing composition which uses fluorinated compounds that are different from Dougherty and from applicants' claimed invention (see page 4, lines 11-15). Thus, the combination of teachings of Dougherty and WO 91/02564 appear to conflict. WO 96/22129 discloses a class of mono- or dialkoxy-substituted fluorine compounds which

appear to be different from those disclosed in WO 91/02564 and Dougherty et al. Thus, there appears to be a conflict of teachings between each of the PCT publications and Dougherty et al.

The further reliance by the examiner on Ricketts et al compounds the deficiencies of the rejection because Ricketts uses a cover gas composition that is different from the fire extinguishing compositions disclosed in the PCT publications and Dougherty et al, and there appears to be no reasonable basis to combine the teachings. The references relied upon by the examiner do not collectively suggest the claimed invention in an obvious manner. Accordingly, reconsideration and withdrawal of this ground of rejection is respectfully requested.

Claims 2-12 and 33 have been rejected under 35 U.S.C. §103 as unpatentable over U.S. Patent No. 1,972,317 to Reimers alone or in view of PCT publication WO 96/22129, U.S. Patent No. 5,115,868 to Dougherty et al and PCT publication WO 91/02564. This ground of rejection is respectfully traversed.

Reimers does not disclose a cover gas composition. Reimers teaches away from the use of a cover gas composition. More specifically, at column 4, line 145 to column 5, line 4, Reimers states:

*"[T]he action of the protective compound is not to produce a blanketing layer of gas in contact with the surface of the molten metal which excludes oxidizing gases from contact therewith, but*

*merely to provide a low concentration of the protective fluorine compound in the normal atmosphere surrounding the metal . . ."*  
(emphasis added)

Thus, Reimers does not disclose or suggest applicants' claimed oxidation inhibiting agent in the context of a cover gas composition that blankets molten magnesium/magnesium alloy to inhibit oxidation. Accordingly, reconsideration and withdrawal of the rejection based on Reimers is respectfully requested.

The combination of WO 96/22129, Dougherty et al, and WO 91/02564 with Reimers does not resolve the deficiencies of the rejection, but instead compounds the deficiencies of this rejection.


The diverse and conflicting teachings of WO 96/22129, Dougherty et al and WO 91/02654 have already been discussed in detail on pages 12 and 13 of this Amendment, and have been distinguished from applicants' claimed inhibiting agent that is used in a cover gas composition to protect molten magnesium/magnesium alloy from oxidation.

There is simply no reasonable basis in which to combine these references to collectively suggest applicants' claimed invention in an obvious manner. Accordingly, reconsideration and withdrawal of this ground of rejection is respectfully requested.

It is respectfully submitted that this application is now in condition for allowance and such favorable action is respectfully requested. If

the examiner still believes that any remaining issues need to be resolved, it is respectfully requested that the undersigned attorney be contacted at (914) 949-7210 in an effort to resolve them.

Respectfully submitted,

  
Charles B. Rodman, Reg. No. 26,798  
Attorney for Applicants

Dated: November 12, 2004  
RODMAN & RODMAN  
7 South Broadway  
White Plains, New York 10601

Telephone: (914) 949-7210  
Facsimile: (914) 993-0668  
959-13